

REMARKS

Claims 1-12, 14, 15, and 21 are pending in this application. Claims 16-20 have been cancelled without prejudice or disclaimer of subject matter. Claims 1 and 14 have been amended to incorporate the features of claims 19 and 20, and claims 2 and 21 have been amended to reflect the changes to claim 1. Support for the amendments can be found, for example, on pages 17, 19 and 20 of the specification. Therefore, no new matter has been added. Reconsideration of the application in light of the remarks, which follow, is respectfully requested.

Claim Rejections Under 35 U.S.C. §103

Claims 1, 6, 8-11, 14 and 17-21 stand rejected under 35 U.S.C §103(a) as being allegedly unpatentable over SUEYOSHI (JP 07237405) and further in view of BEERS (U.S. Patent No. 5,491,196) and CARTER (U.S. Patent No. 5,807,918). The Examiner also has rejected claims 1, 2, 6-11 and 14-19 under 35 U.S.C. §103(a) as being allegedly unpatentable over HATTORI (JP 10297209) and further in view of BEERS and CARTER. In addition, the Examiner has rejected claims 3 and 5 under 35 U.S.C. §103(a) as being allegedly unpatentable over either or of (a) SUEYOSHI, BEERS and CARTER or (b) HATTORI, BEERS, and CARTER and further in view of MATERNE (U.S. Patent No. 6,156,822). Furthermore, the Examiner has rejected claim 4 under 35 U.S.C. §103(a) as being allegedly unpatentable over either one of (a) SUEYOSHI, BEERS, CARTER and MATERNE or (b) HATTORI, BEERS, CARTER and MATERNE, and further in view of NAKAMURA (U.S. Patent No. 6,333,375), and claim 7 under 35 U.S.C. §103(a) as being allegedly unpatentable over SUEYOSHI, BEERS and CARTER and further in

view of KING (U.S. Patent No. 3,563,928) and optionally in view of HATTORI. Lastly, the Examiner has rejected claim 12 under 35 U.S.C. §103(a) as being allegedly unpatentable over either one of (a) SUEYOSHI, BEERS, and CARTER or (b) HATTORI, BEERS, and CARTER, and further in view of GROS (U.S. Patent No. 3,884,993). The Examiner's reasons for the above noted rejections have been previously discussed in Applicant's Response dated April 7, 2004. Applicant respectfully traverses all grounds of rejection.

**THE DISCLOSURES OF THE CITED ART DO NOT TEACH OR
SUGGEST THE CLAIMED INVENTION**

1. The Invention Of The Application

The present invention relates to a tire for motor vehicles bearing heavy loads comprising (a) a carcass ply based on metal cords and an elastomeric carcass layer coating the cords, (b) an inner elastomeric layer (or "inner layer") which defines the radially inner face of the tire, thereby circumscribing the inner space of the tire, and which protects the carcass ply from diffusion of air coming from the inner space of the tire, and (c) an intermediate reinforcement layer (or "intermediate layer") located between the carcass ply and the inner layer. The intermediate reinforcement layer being formed from a composition comprising (i) a natural or synthetic polyisoprene having a majority of chains with cis-1, 4 bonds, and (ii) a solution copolymer of diene monomer(s) and vinyl aromatic monomer(s), wherein the copolymer is a solution SBR copolymer in an amount that is at least 50 phr and the solution SBR copolymer having the relationships defined in the claims, and (iii) 25 to 85 phr of a carbon black having given values of BET

Doc Id. 420106-1

and DBP. The combination of these claimed elements results in a tire having improved endurance as noted in Tables 1 and 2 of Example 1 (*see* pages 18 and 19, Tests 3-6) and Tables 3 and 4 of Example 2 (*see* pages 21 and 22, Tests 9 and 10).

2. There Is No *Prima Facie* Case Of Obviousness

As previously noted in Applicant's Response dated April 7, 2004, the disclosure of SUEYOSHI describes an intermediate reinforcement layer which consists of 3-20 parts of trans-1,4 polyisoprene and 80-97 parts of other diene rubber (*see* Abstract). The diene rubber can be selected among known diene rubbers (*see* paragraph 10) such as natural rubber, styrene-butadiene rubber, polybutadiene rubber or even polyisoprene rubber, etc.

Notably, the present invention is distinguishable over the teachings of SUEYOSHI in several important aspects. Firstly, SUEYOSHI utilizes a trans-1,4 polyisoprene in formulating the intermediate layer, and NOT a cis-1,4 polyisoprene as used in the present invention. Secondly, even if one were to assume that the diene rubber employed by SUEYOSHI is a solution SBR copolymer, the proportions of the trans 1,4 polyisoprene (3-20 parts) and other diene rubber (80-97 parts) taught by SUEYOSHI exclude the possibility of having at least 50 phr of a solution SBR copolymer as required by the present invention. Thirdly, SUEYOSHI does not disclose that the other diene rubber must satisfy the relationships set forth in claims 1, 2 or 14 of Applicant's invention. Lastly, although SUEYOSHI mentions styrene butadiene rubber (SBR) among a non-limited list of diene rubbers, SUEYOSHI fails to disclose the importance that the SBR used be a solution SBR copolymer as required by Applicant's invention.

The disclosure of HATTORI also describes an intermediate reinforcement rubber layer (inner face protective layer 6A), comprising at least 70% of natural rubber and not more than 30% of another diene rubber. By requiring not more than 30% of another diene rubber, HATTORI excludes the intermediate layer composition of the present invention (claims 1 and 14), which has at least 50 phr of a solution SBR copolymer. Additionally, like SUEYOSHI, the teachings of HATTORI fail to disclose that the other diene rubber must satisfy the relationships set forth in claims 1, 2 or 14 of Applicant's invention, and that the SBR copolymer must be a solution SBR.

The Examiner has cited BEERS for illustrating "the common use of SBR having the claimed properties in similar innerliner assemblies..." (*see* page 13 of the present Office Action) and CARTER for disclosing "the well-known properties of carbon blacks listed in Sueyoshi and Hattori." (*See* page 14 of the present Office Action). However, neither BEERS nor CARTER teach or suggest an intermediate layer composition having at least 50 phr of a solution SBR copolymer, wherein the solution SBR must satisfy the relationships set forth in claims 1, 2 or 14 of the present invention.

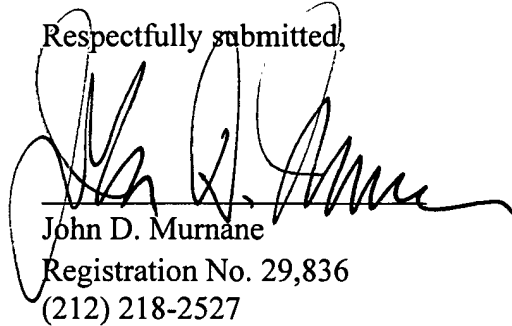
Therefore, Applicant respectfully submits that the Examiner's rejections of claims 1, 6, 8-11, 14 and 17-21 under 35 U.S.C. § 103(a) as being unpatentable over SUEYOSHI and further in view of BEERS and CARTER, and claims 1, 2, 6-11 and 14-19 under 35 U.S.C. § 103(a) as being unpatentable over HATTORI and further in view of BEERS and CARTER are traversed. For the reasons stated above, Applicant asserts that SUEYOSHI, HATTORI, BEERS, CARTER, or any conceivable combination thereof, would not support a *prima facie* case of obviousness.

The remaining rejections are based on combinations of (a) SUEYOSHI, BEERS and CARTER or (b) HATTORI, BEERS and CARTER, and further in view of additional references (e.g., MATERNE, NAKAMURA, KING, and/or GROS). These rejections are also traversed for the reasons stated above. Therefore, Applicant respectfully requests that the rejections of all the claims under 35 U.S.C. § 103(a) be withdrawn.

This Amendment After Final Action is believed clearly to place this application in condition for allowance and, therefore, its entry is believed proper under 37 C.F.R. § 1.116. Accordingly, entry of this Amendment, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, it is respectfully requested that the Examiner contact Applicant's undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing remarks, favorable reconsideration and allowance of all pending claims is earnestly solicited. Applicant's undersigned attorneys may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



John D. Murnane
Registration No. 29,836
(212) 218-2527

Victor Tsu
Registration No. 46,185
(212) 218-2264

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 0112-3801
Facsimile: (212) 218-2200